

Listing of Claims

The following listing of claims replaces all prior versions of the claims.

1. (Currently amended) A filamentary structure for the introduction of an agent into a living host, comprising a filament comprising a solid core and a porous sheath, and an agent selected from the group consisting of hair follicle cells, genetically engineered cells, encapsulated cells, and cell signaling molecules, wherein the solid core comprises a metal or an alloy and wherein the porous sheath comprises a bioabsorbable sheath polymer which coats at least a portion of the solid core.
2. Cancelled.
3. (Previously presented) The filamentary structure of claim 1, wherein when the solid core is made of a biocompatible material selected from the group consisting of metals or alloys containing the elements of iron, nickel, aluminum, chromium, cobalt, titanium, vanadium, molybdenum, gold, and platinum.
4. (Previously presented) The filamentary structure of claim 1, wherein the bioabsorbable sheath polymer is selected from the group consisting of poly(lactic acid), poly(glycolic acid), poly(trimethylene carbonate), poly(amino acid)s, tyrosine-derived poly(carbonate)s, poly(carbonate)s, poly(caprolactone), poly(para-dioxanone), poly(ester)s, poly(ester-amide)s, poly(anhydride)s, poly(ortho ester)s, proteins, carbohydrates, poly(ethylene glycol)s, poly(propylene glycol)s, poly(acrylate ester)s, poly(methacrylate ester)s, poly(vinyl alcohol), and copolymers, blends and mixtures of said polymers.
5. Cancelled.
6. Cancelled.
7. (Currently amended) The filamentary structure of claim 1, wherein the agent is living cells are obtained from hair follicle[s] cells.

8. (Currently amended) The filamentary structure of claim 1 6, wherein the agent is ~~living cells are~~ genetically engineered cells.

9. (Currently amended) The filamentary structure of claim 1 6, wherein the agent is ~~living cells are~~ encapsulated cells.

10. (Currently amended) The filamentary structure of claim 1 5, wherein the agent is cell signaling molecules.

11. Cancelled.

12. (Currently amended) The filamentary structure of claim 1 5, wherein the agent is coated on the outer surface of the porous sheath.

13. (Currently amended) The filamentary structure of claim 1 5, wherein the agent is mixed, dissolved, or imbedded within the porous sheath.

14. (Currently amended) The filamentary structure of claim 1 5, wherein porous sheath defines open pores which are substantially interconnected and large enough to admit the agent.

15. (Previously presented) The filamentary structure of claim 14, wherein the open pores are large enough to admit molecules ranging in molecular weight from about 500 to about 100,000 Daltons.

16. (Currently amended) A method of making a filamentary structure for introducing an agent into a living host, comprising the steps of:

- a) providing a filamentary solid core,
- b) providing a bioabsorbable polymer,
- c) providing a pore-forming agent,
- d) mixing said bioabsorbable polymer with the pore-forming agent,
- e) coating said mixture onto the solid core,
- f) substantially removing or decomposing the pore-forming agent;

g) loading the filamentary structure with an agent selected from the group consisting of hair follicle cells, genetically engineered cells, encapsulated cells, and cell signaling molecules; and

wherein the solid core comprises a metal or an alloy.

17. (Previously presented) The method of claim 16, wherein the bioabsorbable polymer is poly(L/DL-lactide).

18. (Previously presented) The method of claim 16, wherein the pore-forming agent provided in step (c) is azodicarbonamide.

19. (Previously presented) The method of claim 16, wherein the pore-forming agent provided in step (c) is urea dicarboxylic acid anhydride.

20. (Previously presented) The method of claim 16, wherein coating step (e) is performed by melt extrusion.

21. (Currently amended) The method of claim 16, wherein ~~coating steps d and e~~ is are performed by additional steps comprising:

dissolving said mixture of the bioabsorbable polymer and the pore-forming agent in a polymer solvent to form a solution,

coating at least one end of the solid core by placing it in the solution, and removing the solid core from the solution.

22. (Currently amended) The method of claim 21 16, wherein the polymer solvent is also the pore-forming agent.

23-36. Cancelled.

37. (Previously presented) The filamentary structure of claim 4 wherein the protein is selected from the group consisting of collagen, gelatin, and serum albumin.

38. (New) The filamentary structure of claim 7, wherein the hair follicle cells are cultured.

39. (New) The filamentary structure of claim 8, wherein the genetically engineered cells are cultured.

40. (New) The filamentary structure of claim 9, wherein the encapsulated cells are cultured.